

CLAIMS

1. An ion implantation apparatus comprising:
an ion source section for generating ions;
an ion implantation section for implanting said
5 ions generated in said ion source section, in a
substrate;

Sub 43
a charged particle generator for generating
charged particles having a charge opposite to that of
said ions;

10 a beam guide section having an inlet aperture for
accepting said ions from said ion source section, an
outlet aperture for delivering said ions into said ion
implantation section, a guide tube extending from said
inlet aperture to said outlet aperture, and an
15 introducing section having an opening thereof in an
internal surface of said guide tube, for introducing
said charged particles from said charged particle
generator into said guide tube; and

20 a shield section located between said opening of
said introducing section and said outlet aperture
inside said guide tube.

2. The ion implantation apparatus according to
Claim 1, wherein said shield section comprises a shield
surface intersecting with straight lines running from
25 points on a surface specified by said opening of said
introducing section to points on a surface of said

substrate to be implanted with the ions, placed in said ion implantation section.

3. The ion implantation apparatus according to Claim 1, wherein said shield section comprises a shield surface extending from the vicinity of the edge of said opening to above said opening.

4. The ion implantation apparatus according to Claim 1, wherein said shield section comprises a shield surface intersecting with straight lines running from points on a surface specified by said opening of said introducing section to points on a surface specified by said outlet aperture of said ion beam section.

5. The ion implantation apparatus according to Claim 2, wherein said shield section comprises said shield surface making an acute angle with the internal wall surface of said guide tube and having a flat plate shape.

6. The ion implantation apparatus according to Claim 2, wherein said shield section comprises a flat plate having said shield surface and placed at an acute angle to the internal wall surface of said guide tube, and a frame member for supporting said flat plate.